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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,970	11/18/2003	Alex Homg	HORN3171/EM	4591
23364	7590	02/04/2005	EXAMINER	
BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314			VERDIER, CHRISTOPHER M	
			ART UNIT	PAPER NUMBER
			3745	

DATE MAILED: 02/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/714,970

Applicant(s)

HORNG ET AL.

Examiner

Christopher Verdier

Art Unit

3745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11-18-03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Examiner's Suggestions to Claim Language

The following are suggestions to improve the clarity and precision of the claims:

In claim 1, line 6, "the respective blade" may be changed to -- one of said blades --.

In claim 13, line 1, "11" may be changed to 12. Alternately, in claim 13, line 1, "the" may be changed to -- a --.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-2, 5, 9, and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taiwanese Patent 540,641 in view of Hong 5,582,506. The Taiwanese Patent (the figures of pages 8734-8737) discloses a heat dissipating fan substantially as claimed, including a cover

Art Unit: 3745

plate 70 with an air inlet 54, an impeller 60 including plural blades 66, an air guiding member 52 including an unnumbered air passageway and an air outlet 56, a portion of an axial height of a blade being received in the air passageway, plural side inlets (74, and the inlets defined between elements 72) defined between the cover plate and the air guiding member, with air intake occurring at the same time in the air inlet and in the side inlets when the impeller turns, driving airflow to exit the air outlet in a predetermined direction, with the cover plate including a first engaging portion (posts 72) and the air guiding member including an unnumbered second engaging portion (below posts 72) engaged with the first engaging portion, with the cover plate including plural posts (rectangular posts 72) projecting downward from a peripheral portion of an underside of the cover plate, thus reducing the possibility of entrance of alien objects and improving structural strength of the impeller

However, the Taiwanese Patent does not disclose that the impeller is mounted to a base of the cover plate, with the impeller being mounted to an upper side of the base of the cover plate, with plural ribs connected between the cover plate and the base, with the ribs forming plural stationary blades for guiding airflow. Rather, the impeller is mounted to the air guiding member.

Hong '506 (figures 1-3) shows a heat dissipating fan having an impeller 2 mounted to a base 32 of a cover plate 3, with the impeller being mounted to an upper side of the base of the cover plate, with plural ribs 31 connected between the cover plate and the base, with the ribs

Art Unit: 3745

forming plural stationary blades for guiding airflow, for the purpose of securely mounting the impeller to the cover plate, and allowing a large amount of cooling air to be induced.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to form the fan of Taiwanese Patent 540,641 such that the impeller is mounted to a base of the cover plate, with the impeller being mounted to an upper side of the base of the cover plate, with plural ribs connected between the cover plate and the base, with the ribs forming plural stationary blades for guiding airflow, as taught by Hong '506, for the purpose of securely mounting the impeller to the cover plate, and allowing a large amount of cooling air to be induced.

Claims 1-2, 6, 9, and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taiwanese Patent 540,641 in view of Hong 5,552,700. The Taiwanese Patent (the figures of pages 8734-8737) discloses a heat dissipating fan substantially as claimed, including a cover plate 70 with an air inlet 54, an impeller 60 including plural blades 66, an air guiding member 52 including an unnumbered air passageway and an air outlet 56, a portion of an axial height of a blade being received in the air passageway, plural side inlets (74, and the inlets defined between elements 72) defined between the cover plate and the air guiding member, with air intake occurring at the same time in the air inlet and in the side inlets when the impeller turns, driving airflow to exit the air outlet in a predetermined direction, with the cover plate including a first engaging portion (posts 72) and the air guiding member including an unnumbered second engaging portion (below posts 72) engaged with the first engaging portion, with the cover plate

Art Unit: 3745

including plural posts (rectangular posts 72) projecting downward from a peripheral portion of an underside of the cover plate, thus reducing the possibility of entrance of alien objects and improving structural strength of the impeller

However, the Taiwanese Patent does not disclose that the impeller is mounted to a base of the cover plate, with the impeller being mounted to an underside of the base of the cover plate, with plural ribs connected between the cover plate and the base, with the ribs forming plural stationary blades for guiding airflow. Rather, the impeller is mounted to the air guiding member.

Hong '700 (figures 1-3) shows a heat dissipating fan having an impeller 2 mounted to a base 11 of a cover plate 1, with the impeller being mounted to an underside of the base of the cover plate, with plural ribs 101 connected between the cover plate and the base, with the ribs forming plural stationary blades for guiding airflow, for the purpose of securely mounting the impeller to the cover plate.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to form the fan of Taiwanese Patent 540,641 such that the impeller is mounted to a base of the cover plate, with the impeller being mounted to an underside of the base of the cover plate, with plural ribs connected between the cover plate and the base, with the ribs forming plural stationary blades for guiding airflow, as taught by Hong '700, for the purpose of securely mounting the impeller to the cover plate, and allowing a large amount of cooling air to be induced.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taiwanese Patent 540,641 and Hong 5,582,506 as applied to claim 2 above, and further in view of Katsui 5,559,674. The modified fan of the Taiwanese Patent shows all of the claimed subject matter except for the first engaging portion including plural through holes and the second engaging member including plural posts each having a screw hole aligned with the respective through hole.

Katsui (figure 2) shows a heat dissipating fan having a cover plate 84 with a first engaging portion including unnumbered through holes (filled by screws 92) and an air guiding member 82 having plural posts 85A, 85B, 85C, 85D each having an unnumbered screw hole aligned with the respective through hole, for the purpose of allowing the cover plate to be securely fastened to the air guiding member.

It would have been further obvious at the time the invention was made to a person having ordinary skill in the art to form the modified fan of Taiwanese Patent 540,641 such that the first engaging portion includes plural through holes and the second engaging member includes plural posts each having a screw hole aligned with the respective through hole, as taught by Katsui, for the purpose of allowing the cover plate to be securely fastened to the air guiding member.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taiwanese Patent 540,641 and Hong 5,582,506 as applied to claim 2 above, and further in view of Gan 6,817,939.

Art Unit: 3745

The modified fan of the Taiwanese Patent shows all of the claimed subject matter except for the second engaging portion including plural through holes and the first engaging member including plural posts each having a screw hole aligned with the respective through hole.

Gan shows a heat dissipating fan having a cover plate 40 (element 40 is broadly considered to be a cover plate) and an air guiding member 30, with the cover plate including a first engaging portion (near 42) and the air guiding member including a second engaging portion 312, with the second engaging portion including plural through holes 312 and the first engaging member including plural posts (near 42) each having a screw hole 42 aligned with the respective through hole 312, for the purpose of allowing the cover plate to be securely fastened to the air guiding member.

It would have been further obvious at the time the invention was made to a person having ordinary skill in the art to form the modified fan of Taiwanese Patent 540,641 such that the second engaging portion includes plural through holes and the first engaging member includes plural posts each having a screw hole aligned with the respective through hole, as taught by Gan, for the purpose of allowing the cover plate to be securely fastened to the air guiding member.

Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taiwanese Patent 540,641 and Hong 5,582,506 as applied to claim 1 above, and further in view of either (Ko 2004/0201961 or Chen 6,524,674). The modified fan of the Taiwanese Patent shows all of the claimed subject matter except for a sectional area of an air outlet side of the air passageway

Art Unit: 3745

being smaller than that of an air inlet side of the air passageway, and except for the air passageway extending in a direction at an angle with an airflow direction, guiding the airflow to the predetermined direction.

Ko (figures 3A-3B) shows a fan having an unnumbered air guiding member formed such that the sectional area of an air outlet side of an air passageway of the air guiding member is smaller than that of an air inlet side of the air passageway, with the the air passageway extending in a direction at an angle with an airflow direction, guiding the airflow to a predetermined direction, for the purpose of allowing concentrated air streams to provide better heat dissipating performance.

Chen (figures 2a-2b) shows a fan 22 having an air guiding member 21 formed at 213 such that the sectional area of an air outlet side 212 of an air passageway of the air guiding member is smaller than that of an air inlet side of the air passageway, with the the air passageway extending in a direction at an angle with an airflow direction, guiding the airflow to a predetermined direction, for the purpose of concentrating airflow toward a central area, thus improving heat dissipation.

It would have been further obvious at the time the invention was made to a person having ordinary skill in the art to form the modified fan of Taiwanese Patent 540,641 such that a sectional area of an air outlet side of the air passageway is smaller than that of an air inlet side of the air passageway, with the air passageway extending in a direction at an angle with an airflow

Art Unit: 3745

direction, guiding the airflow to the predetermined direction, as taught by Ko, for the purpose of allowing concentrated air streams to provide better heat dissipating performance, or as taught by Chen, for the purpose of concentrating airflow toward a central area, thus improving heat dissipation.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taiwanese Patent 540,641 in view of Hong 5,582,506. The Taiwanese Patent (the figures of pages 8734-8737) discloses a heat dissipating fan substantially as claimed as set forth above, with the cover plate 70 including plural posts (rectangular posts 72) projecting downward from a peripheral portion of an underside of the cover plate, thus reducing the possibility of entrance of alien objects and improving structural strength of the impeller.

However, the Taiwanese Patent does not show that the air guiding member 52 includes the rectangular posts 72, such that the posts project upward from a peripheral portion of an upper side of the air guiding member.

It would have been further obvious at the time the invention was made to a person having ordinary skill in the art to form the modified fan of the Taiwanese Patent such that the air guiding member 52 includes the rectangular posts 72, such that the posts project upward from a peripheral portion of an upper side of the air guiding member, since it has been held that mere reversal of parts is an obvious engineering expedient. *In re Gazda*, 219 F.2d 449, 104 USPQ 400 (CCPA 1955).

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taiwanese Patent 540,641 and Hong 5,582,506 as applied to claim 11 above, and further in view of Bendikas 6,457,949. The modified fan of the Taiwanese Patent shows all of the claimed subject matter, including stationary blades, but does not show the stationary blades including an inclining angle opposite to that of the blades.

Bendikas (figure 1) shows a heat dissipating fan near 10 having unnumbered stationary blades that have an inclining angle that is opposite to that of blades of fans 40, 41, 42, for example, for the purpose of smoothly guiding airflow at the fans.

It would have been further obvious at the time the invention was made to a person having ordinary skill in the art to form the modified fan of the Taiwanese Patent such that the stationary blades include an inclining angle opposite to that of the blades, as taught by Bendikas, for the purpose of smoothly guiding airflow at the fan.

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hornig '549 and Lin '014 are cited to show plural fans with side air inlets and an axial outlet.

Art Unit: 3745

North is cited to show a fan with a converging outlet.

Fujinaka is cited to show a fan with plural side inlets and an axial outlet.

Lin' 130 is cited to show a fan with a curved outlet.


Hornig '455 is cited to show a fan having a cover plate with posts and a screw connection to an air guiding member.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Verdier whose telephone number is (571) 272-4824. The examiner can normally be reached on Monday-Friday from 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward K. Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C.V.
February 1, 2005


Christopher Verdier
Primary Examiner
Art Unit 3745